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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,673	04/02/2004	Hoi-Sing Kwok	016660-214	9754

21839 7590 05/03/2005

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EXAMINER

HASAN, MOHAMMED A

ART UNIT PAPER NUMBER

2873

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EJC

Office Action Summary	Application No. 10/815,673	Applicant(s) KWOK, HOI-SING	
	Examiner Mohammed Hasan	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 - 19, 27 - 33, 40 - 46 is/are allowed.
- 6) ☒ Claim(s) 1-3, 20, and 34 is/are rejected.
- 7) ☒ Claim(s) 4 - 9, 21- 26, and 35 - 39 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Oath/Declaration

1. Oath and declaration filed on 8/17/2004 is accepted.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 20, and 34 are rejected under 35 U.S.C. 102 (e) as being anticipated by Shioya (6,795,249 B2).

Regarding claim 1, Shioya discloses (refer to figure8) a projection system (300) comprising (a) a substantially planar light source (1), (b) means for converting light from planar light source into a single polarization (i.e., lens 21), an imaging lens (22) for imaging planar light source into a single polarization, (c) an imaging lens for imaging planar light source onto a light valve imager (42) (d) a polarization beam splitter (81) for separating the input and output light on the light valve (42) imager and (e) a

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projection lens (5) to project the image on the light valve onto a screen (99) (column 7, lines 29- 40).

Regarding claim 2, Shioya discloses (refer to figure 9) the light valve (42) imager comprises a reflective liquid crystal on silicon microdisplay (column 8, lines 1 – 7).

Regarding claim 3, Shioya discloses (refer to figure 8) the light valve (42) imager provided with color filters on subpixels (column 8, lines 1 - 9).

Regarding claim 20, Shioya discloses (refer to figure 4) a projection system (100) comprising (a) a substantially planar light source (1), (b) means for converting light from planar light source into a single polarization (i.e., lens 21), (c) an imaging lens (22) for imaging planar light source onto a transmittive active matrix liquid crystal cell light valve imager (41), and (d) a projection lens (5) to project the image on the light valve onto a screen (99) (column 4, lines 35 – 67, column 5, lines 1 - 38).

Regarding claim 34, Shioya discloses (refer to figure 4) a projection system (100) comprising (a) a substantially planar light source (1), (b) means for pulsing the light source to provide red green and blue colors sequentially in time (i.e., color wheel 31, rotates in synchronism with the timing of the supply of a plurality of image signals that correspond to each color that is supplied in time divisions) , (c) an imaging lens (22) for imaging planar light source onto a reflective digital mirror light valve imager (41), and (d) a projection lens (5) to project the image on the light valve onto a screen (99) (column 4, lines 35 – 67, column 5, lines 1 - 38).

Allowable Subject Matter

3. Claims 10 – 19, 27 – 33, 40 – 46 are allowed.
4. The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in a combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 10, 27, and 40, for example, which include, a projection system having a second imaging lens for imaging green planar light source onto a second light valve imager and a second polarizing beam splitter for separating the green input and a green output light on the second light valve imager ,a third imaging lens for imaging blue planar light source onto a third light valve imager and a third polarization beam splitter that separates blue input and output light on the third light valve imager and x – cube prism for combining the out put red green and blue light from the first, second and third light valve imager (claims 10, 27 and 40).
5. Claims 4 – 9, 21 – 26, and 35 – 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to means for converting light from the planar light source into a single polarization comprises a quarterwave retardation film and a reflective polarizer film placed in close proximity to the planar light source, planar light source is a cold

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cathode fluorescence lamp with a planar discharge plasma, a planar light source is a vacuum field emission device, and a planar light source is an array of light emitting diodes arranged in a closely packed manner on a plane, a planar light source comprises an optical film for collimating the light so that it propagates predominately in the forward direction, and a planar light source comprises a reflective surface for reflective ultraviolet light and transmitting visible light.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Itoh (6,036,318) discloses a projection type display apparatus.

Marshall (6,262,851 B1) discloses a double-pass projection display system with separate polarizer's and analyzers.

Bergman et al (6,257,728 B1) discloses a color projection system.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH
April 26, 2005



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800